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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/126,622	07/30/1998	CORMAC HERLEY	10970294-1	9131

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[REDACTED] EXAMINER

VU, NGOC YEN T

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2612

DATE MAILED: 07/31/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

GJ

Office Action Summary

Application No. 09/126,622	Applicant(s) Cormac HERLEY
Examiner Ngoc-Yen Vu	Art Unit 2612



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on May 13, 2003
2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) Claim(s) 11-17, 19-25, and 27-32 is/are pending in the application.
4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 11-17, 19-25, and 27-32 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
10) The drawing(s) filed on _____ is/are a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some* c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 *See the attached detailed Office action for a list of the certified copies not received.
14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
 a) The translation of the foreign language provisional application has been received.
15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) Other: _____

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Response to Amendment

1. The amendments, filed on 05/13/2003, have been entered and made of record. Claims 11-17, 19-25 and 27-32 are pending.

Response to Arguments

2. Applicant's arguments with respect to claims 11-17, 19-25 and 27-32, filed 05/13/2003, have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 11-16, 19-24 and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weldy et al. (US #6,181,826) in view of Saito (US #5,838,834), and further in view of Wakui (US #5,648,816).

Claims 19-22 will be discussed first. Regarding claims 19- 22, in figures 5, 7 and 8, Weldy '826 teaches a system of processing digital images comprising:

means for inputting a raw image (base image 16, image E/F/G/H, image AA-AN; col. 7 lines 44-62; col. 9 line 59 - col. 10 line 28);
means for generating from the raw image, including employing a first quantizing step, a first compressed image data set suitable for reproducing substantial the entire image at a first

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quality level (quantizer 30, base 8 bits 31; reconstruct image EF, spatially convert circuit 60A/60B; col. 7 line 44 - col. 9 line 14; col. 9 line 59 - col. 10 line 28; col. 15 line 43 - col. 16 line 44); and

means for generating from the raw image, including employing a second quantizing step independent of the first quantizing step, a second compressed image data set which when combined with the first compressed image data set reproduces substantially the entire image at a second, higher quality level (quantizers 32/34/36, base images 33/35/37, reconstruct image GH, reconstructed image 59, spatially convert 60C/60N, combine images 61 and reconstructed image 63; col. 7 line 44 - col. 9 line 14; col. 9 line 59 - col. 10 line 28; col. 15 line 43 - col. 16 line 44).

Claims 19-22 differ from Weldy in that the claim further requires that the system of processing images in a digital camera. However, it is well known in the art to process and compress digital images having different quantizing and coding steps in a digital camera, as taught in Saito. In the same field of endeavor, Saito '834 teaches a digital camera including a DCT (103), a quantizer (104) and a quantization table (105) for process and compress digital images which are stored in a compressed data memory (113) (see Fig. 4). In light of the teaching from Saito, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the system of processing digital images taught in Weldy in a digital camera in order to provide images having different resolutions as desired by the user.

Claims 19- 22 further differ from Weldy, as modified by Saito, in that the claim further requires the digital camera includes primary and secondary storage areas, and means for releasing

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space in the secondary storage area wherein if insufficient space is available in the primary storage area of the image storage device to store the first compressed image data set. The limitations are well known in the art as shown in Wakui. In the same field of endeavor, Wakui '816 teaches a digital camera having a primary storage area (IC memory card 31) and a secondary storage area (image flash memory 20) (see Figs. 1-3). Wakui further teaches that the image data is primarily recorded in the IC memory card (31), wherein the image data is recorded in the image flash memory (20) when the IC memory card (31) has no remaining storage capacity (see col. 6 line 46 - col. 7 line 16; col. 8 line 51 - col. 9 line 13; col. 14 lines 9-32; col. 20 lines 21-42). Wakui also teaches an erasing device for erasing the image signals recorded in the image flash memory (20) (see col. 2 line 60 - col. 3 line 18; col. 6 line 46 - col. 7 line 16; col. 7 line 63 - col. 8 line 5; col. 14 lines 9-62; col. 18 lines 12-44). In light of the teaching from Wakui, it would have been obvious to one of ordinary skill in the art to modify the system of processing images in a digital camera taught in Weldy and Saito by having primary and secondary storage areas and allowing recorded image data to be selectively erased or released from the secondary storage area so as to ensure that no images are lost due to the lack of capacity of the primary storage area.

As to claims 23 and 24, Wakui '816 teaches that the images recorded in the image flash memory (20) can be selectively erased (see col. 2 line 60 - col. 3 line 18; col. 6 line 46 - col. 7 line 16; col. 7 line 63 - col. 8 line 5; col. 14 lines 9-62; col. 18 lines 12-44). In light of the

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teaching from Wakui, it would have been obvious to one of ordinary skill in the art to erase the recorded images in a first-in-first-out order or in a last-in-first-out order as desired by the user.

Regarding claims **11-16**, they are method claims corresponding to the apparatus claims 19-24, respectively. Therefore, claims 11-16 are analyzed and rejected as previously discussed with respect to claims 19-24.

Regarding claims **27-31**, the limitations in claims 27-31 can be found in claims 19-24.

5. Claims 17, 25 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weldy '826 in view of Saito' 834 and Wakui '816, as applied to claims 14, 22 and 29 above, and further in view of Yamagata (US #6,263,106).

As to claims **17, 25 and 32**, the claims differ from Weldy, as modified by Saito and Wakui, in that the claims further require that the compressed image data stored in the secondary storage area has associated with it an image quality metric, and the step of releasing space in the secondary storage area releases space in lowest image quality first order. However, in order to reduce the time to reproduce high quality images, it is well known in the art to store images having different compressed level in an image storage area, and the images having higher image quality are being kept, as taught in Yamagata '106 (See the abstract; col. 1 lines 27-43; col. 5 line 27 - col. 6 line 36). In light of the teaching in Yamagata, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the digital camera taught in Weldy, as modify by Saito and Wakui by storing an image quality metric associated with images in the

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secondary storage area and releasing space in the secondary storage area by releasing images having lowest quality so as to reduce the time to reproduce high quality images.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. **Any response to this office action should be mailed to:**

Box AF

Commissioner of Patents and Trademarks

Washington, D.C. 20231

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or faxed to:

(703) 872-9314, (for formal communications intended for entry)

(for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Ngoc-Yen Vu** whose telephone number is (703) 305-4946. The examiner can normally be reached on Mon - Fri from 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Wendy Garber**, can be reached on (703) 305-4929.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (703) 306-0377.

NYV
07/27/2003


NGOC-YEN VU
PRIMARY EXAMINER

Group Art Unit 2612